

### ABSTRACT OF THE DISCLOSURE

A network of radiation detection instruments, each having a small solid state radiation sensor module integrated into a cellular phone for providing radiation detection data and analysis directly to a user. The sensor module includes a solid-state crystal bonded to an ASIC readout providing a low cost, low power, light weight compact instrument to detect and measure radiation energies in the local ambient radiation field. In particular, the photon energy, time of event, and location of the detection instrument at the time of detection is recorded for real time transmission to a central data collection/analysis system. The collected data from the entire network of radiation detection instruments are combined by intelligent correlation/analysis algorithms which map the background radiation and detect, identify and track radiation anomalies in the region.